

03-16-06

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Practitioner's Docket No. 1617.22B

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Ken-ichi KOSUNA

Patent No.: 7,011,856

Issue date: 3/14/2006

Application No.: 10/045,972

Group No.: 1654

Filed: 02/28/2002

Examiner: Susan D. Coe

For: COMPOSITION FOR THE TREATMENT OF SYMPTOMS AND CONDITIONS ASSOCIATED WITH AGING

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

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Certificate  
MAR 21 2006  
of Correction

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Request for Cert. of Patent Correction for PTO Mistake

PTO/SB/44 in duplicate and suitable for printing

Copy of page 6 of 6/14/2005 Applicant RCE communication

Copy of col. 16 of issued patent

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is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. § 1.10, on the date indicated above and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dennis G. LaPointe

Signature of person mailing paper or fee

MAR 22 2006



Practitioner's Docket No. 1617.22B

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Patent Number: 7,011,856  
Issued: March 14, 2006  
Name of Patentee: Ken-ichi KOSUNA

Title of Invention: COMPOSITION FOR THE TREATMENT OF SYMPTOMS AND CONDITIONS  
ASSOCIATED WITH AGING



Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**REQUEST FOR CERTIFICATE OF CORRECTION OF PATENT  
FOR PTO MISTAKE (37 C.F.R. § 1.322(a))**

1. Attached is PTO/SB/44 (also Form PTO-1050) in a form suitable for printing.
2. The exact page and line number where the errors are shown correctly in the application file are:

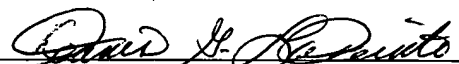
Page 6 of Applicant communication filed June 14, 2005 (RCE), lines 8-9 of claim 16 wherein the lines read:

R' is

..... OH and  OH and the ratio of ..... OH to  OH is 1 to 2

3. Please send the Certificate to:

Name: DENNIS G. LAPOINTE  
Address: LAPOINTE LAW GROUP, PL  
P.O. BOX 1294  
TARPON SPRINGS, FL 34688

  
Dennis G. LaPointe, Attorney of Record

1617.22B

# UNITED STATES PATENT AND TRADEMARK OFFICE

## CERTIFICATE OF CORRECTION

PATENT NO. : 7,011,856

Page 1 of 1

APPLICATION NO.: 10/045,972

ISSUE DATE : March 14, 2006



INVENTOR(S) : Ken-ichi KOSUNA

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In col. 16, lines 49-51:



Replace formula:

R' is

..... OH and  OH and the ratio of ..... to  OH is 1 to 2

with formula:

R' is

..... OH and  OH and the ratio of ..... OH to  OH is 1 to 2

MAILING ADDRESS OF SENDER (Please do not use customer number below): 7,011,856

DENNIS G. LAPOINTE  
LAPOINTE LAW GROUP, PL  
P.O. BOX 1294  
TARPON SPRINGS, FL 34688

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 7,011,856

Page 1 of 1

APPLICATION NO.: 10/045,972

ISSUE DATE : March 14, 2006



INVENTOR(S) : Ken-ichi KOSUNA

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In the above formula, the decoloration ratio is a natural logarithm  $\ln((a)/(b))$  representing the proportion of the absorbance after 30 minutes (a) to the absorbance after 90 minutes (b). These results is set forth in FIG. 3.

As shown in FIG. 3 the dashed line shows the activity value of buckwheat essence without fractionation treatment (Sample 2 in Product Example 1). Accordingly, the (epi) catechin polymer, which is the main ingredient of the buckwheat extract essence of the present invention, shows its high activity at polymerization degrees 4-7. Further, if anti-oxidation activity depended on the number of hydroxyl groups, and as long as it is based on the weight, the results for the monomer and the polymer would be the same. These experimental results, however, which show a higher activity for the polymer than the monomer reveal that the polymerization of monomer molecules provides compositions that are useful in the treatment and/or therapy of aging. Accordingly, the composition derived from buckwheat of the present invention abundantly contains polymers or oligomers of the above-mentioned polymerization degree wherein catechin and epicatechin are mixed. Further, the composition has high anti-oxidation activity.

Thus, while there has been described what are presently believed to be the preferred embodiments of the invention, those skilled in the art will understand that other and further modification can be made without departing from the spirit of the invention. It is intended that the present invention includes all such modifications as come within the true scope of the invention as set forth in the claims.

What is claimed is:

1. A composition for treating symptoms and conditions associated with aging, the composition including an active ingredient consisting essentially of:

one of

- an aqueous extract of buckwheat seed extracted at a temperature of between 61° C. and 150° C.,
  - a fractionation product of an aqueous extract of buckwheat seed, and
  - a combination of said aqueous extract of buckwheat seed and said fractionation product of said aqueous extract of buckwheat seed,
- wherein the active ingredient contains polymers having 4 to 9 monomer units, said polymers having a molecular weight of from about 1,000 to about 10,000,
- wherein the composition enhances an activity of protein kinase C (PKC), improves short time memory and alleviates decrease in space cognition caused by aging.

2. The composition according to claim 1, wherein the aqueous extract of buckwheat seed has a molecular weight of about 1500 or more.

3. The composition according to claim 1, wherein the composition alleviates and treats symptoms and conditions caused by dementia.

4. The composition according to claim 2, wherein the composition alleviates and treats symptoms and conditions caused by dementia.

5. The composition according to claim 1, wherein the composition alleviates and treats symptoms and conditions caused by Alzheimer's syndrome.

6. The composition according to claim 2, wherein the composition alleviates and treats symptoms and conditions caused by Alzheimer's syndrome.

7. The composition according to claim 1, wherein the composition inhibits lipid peroxide.

8. The composition according to claim 2, wherein the composition inhibits lipid peroxide.

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9. The composition according to claim 1, wherein the composition treats hyperlipemia.

10. The composition according to claim 2, wherein the composition treats hyperlipemia.

11. The composition according to claim 1, wherein the composition lowers triacylglycerol levels.

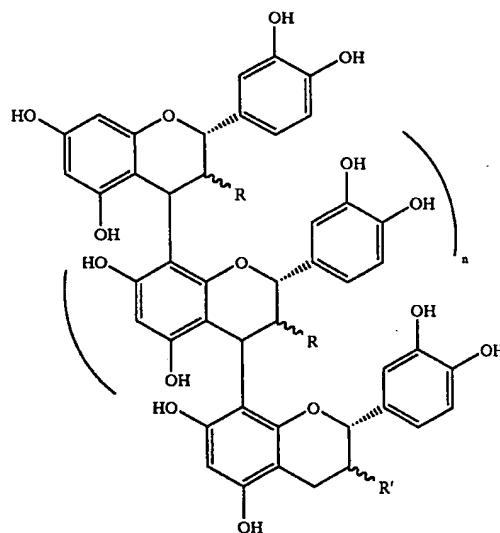
12. The composition according to claim 2, wherein the composition lowers triacylglycerol levels.

13. The composition according to claim 1, wherein the composition lowers cholesterol levels.

14. The composition according to claim 2, wherein the composition lowers cholesterol levels.

15. The composition according to claim 1, wherein the polymer having four to nine monomer units consists essentially of a catechin-epicatechin polymer having four to nine monomer units.

16. The composition according to claim 1, wherein the polymers having four to nine monomer units consist essentially of catechin-epicatechin polymers of the formula:



wherein a has a value of from 2 to 7, and

R is

$\text{HO}-\text{C}_6\text{H}_3(\text{OH})-\text{OH}$  and  $\text{HO}-\text{C}_6\text{H}_2(\text{OH})-\text{OH}$  and the ratio of  $\text{HO}-\text{C}_6\text{H}_3(\text{OH})-\text{OH}$  to  $\text{HO}-\text{C}_6\text{H}_2(\text{OH})-\text{OH}$  is 2 to 1,

R' is

$\text{HO}-\text{C}_6\text{H}_3(\text{OH})-\text{OH}$  and  $\text{HO}-\text{C}_6\text{H}_2(\text{OH})-\text{OH}$  and the ratio of  $\text{HO}-\text{C}_6\text{H}_3(\text{OH})-\text{OH}$  to  $\text{HO}-\text{C}_6\text{H}_2(\text{OH})-\text{OH}$  is 1 to 2

giving a ratio of catechin to epicatechin in the upper terminal and middle of 2 to 1 and a 1 to 2 ratio of catechin to epicatechin in the lower terminal.

17. The composition of claim 16 wherein n has a value of 3.

18. The composition of claim 16 wherein n has a value of 5.

19. The composition of claim 16 wherein n has a value of 7.

20. The composition of claim 2 wherein the polymer consists essentially of an catechin-epicatechin oligomer.

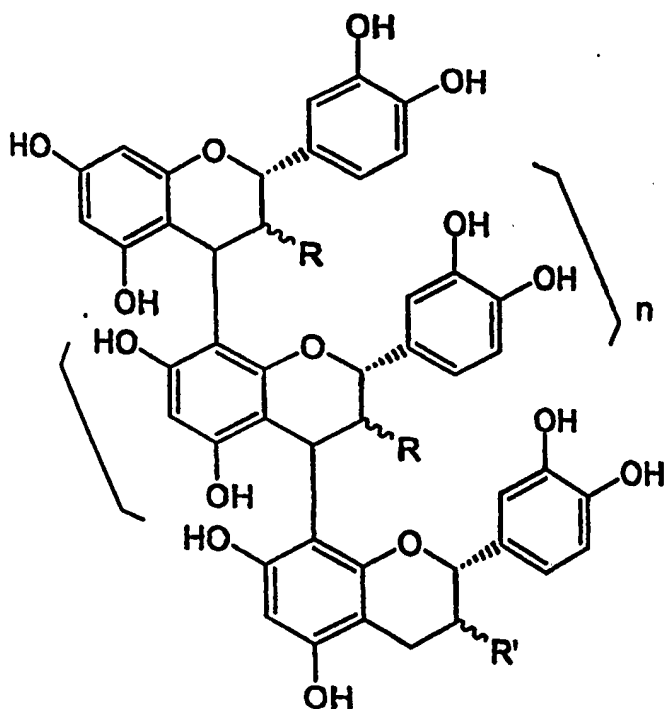
21. A method of improving the memory of humans and animals comprising administering to said humans and animals an effective amount of a composition having an active ingredient consisting essentially of:

one of

*should be  
all OH to  
missing*

From: Communication of 6/14/05 - RCE

16. (Previously Presented) The composition according to Claim 1, wherein the polymers having four to nine monomer units consist essentially of catechin-epicatechin polymers of the formula:



wherein n has a value of from 2 to 7, and

R is

..... OH and — OH and the ratio of ..... OH to — OH is 2 to 1,

R' is

..... OH and — OH and the ratio of ..... OH to — OH is 1 to 2

giving a ratio of catechin to epicatechin in the upper terminal and middle of 2 to 1 and a 1 to 2 ratio of catechin to epicatechin in the lower terminal.